based on a modulating signal obtained by adding a redundancy code to a transmission data code;

converting the optical signal transmitted by said optical fiber transmission line into an electrical signal;

detecting a bit error of said electrical signal;

controlling said chirp parameter so that said bit error detected is reduced; and

correcting said bit error of said electrical signal according to said redundancy code, wherein said detecting including counting the number of corrections of said bit error obtained in said correcting, and wherein said controlling said chirp parameter based upon comparing between a first number of corrections of said bit error and a second number of corrections of said bit error.

Sub D1

2. (AS ONCE AMENDED) A method according to claim 1, wherein said controlling including switching the sign of said chirp parameter.

3. (AS ONCE AMENDED) A method according to claim 2, wherein:

said outputting including generating said optical signal by optical modulation using a Mach-Zehnder optical modulator; and

controlling including switching an operating point of said Mach-Zehnder optical modulator.

4. (AS ONCE AMENDED) A method according to claim 1, said outputting including adjusting said chirp parameter to an optimum value so that said bit error detected is minimized.

5. (AS ONCE AMENDED) A method according to claim 4, wherein:

outputting including generating said optical signal by optical modulation using an electroabsorption optical modulator; and

controlling including changing a bias voltage to be applied to said electroabsorption optical modulator.

6. (CANCELLED)

Sub C2

7. (AS TWICE AMENDED) A system comprising:

first and second terminal devices; and

an optical fiber transmission line connecting said first and second terminal devices;

said first terminal device comprising:

an optical transmitter outputting an optical signal having a chirping determined by a chirp parameter to said optical fiber transmission line, said optical transmitter generating said optical signal by optical modulation based on a modulating signal obtained by adding a redundancy code to a transmission data, and

a control unit controlling said chirp parameter according to a control signal, said control unit correcting said bit error of said electrical signal according to said redundancy code;

said second terminal device comprising:

an optical receiver converting the optical signal transmitted by said optical fiber transmission line into an electrical signal,

a monitor unit detecting a bit error of said electrical signal, said monitor unit comprising counting the number of corrections of said bit error obtained by said control unit, and

B2

means for transmitting supervisory information on said bit error detected to said first terminal device; wherein said control signal is generated in said first terminal device so that said bit error detected is reduced and wherein said control unit controlling said chirp parameter based upon comparing between a first number of corrections of said bit error and a second number of corrections of said bit error.

Sub D1

8. (AS ONCE AMENDED) A system according to claim 7, wherein:

said optical transmitter comprises a light source outputting continuous wave (CW) light, and a Mach-Zehnder optical modulator for modulating said CW light to generate said optical signal; and

said control unit includes means for switching an operating point of said Mach-Zehnder optical modulator, thereby switching the sign of said chirp parameter.

9. (AS ONCE AMENDED) A system according to claim 7, wherein:

said optical transmitter comprises a light source for outputting continuous wave (CW)

light, and an electroabsorption optical modulator for modulating said CW light to generate said optical signal; and

said control unit includes means for changing a bias voltage to be applied to said electroabsorption optical modulator, thereby adjusting said chirp parameter to an optimum value so that said bit error detected is minimized.

10. (AS ONCE AMENDED) A system according to claim 7, wherein:

said optical transmitter comprises a light source outputting continuous wave (CW) light, an encoder adding the redundancy code to the transmission data code to thereby generate the modulating signal, an optical modulator modulating said CW light according to said modulating signal to thereby generate said optical signal;

said optical receiver includes a decoder correcting said bit error of said electrical signal according to said redundancy code; and

B2 cont'd

said monitor unit includes means for counting the number of corrections of said bit error obtained by said decoder.

11. (AS ONCE AMENDED) A system according to claim 7, wherein:

said first terminal device further comprises an optical amplifier amplifying the optical signal output from said optical transmitter.

12. (AS ONCE AMENDED) A system according to claim 7, wherein:

said second terminal device further comprises an optical amplifier amplifying the optical signal to be received by said optical receiver.

13. (AS ORIGINAL) A system according to claim 7, wherein said optical fiber transmission line is provided by a dispersion shifted fiber having a zero-dispersion wavelength near 1.55μm.

14. (AS ORIGINAL) A system according to claim 7, wherein said optical fiber transmission line is provided by a single-mode fiber having a zero-dispersion wavelength near 1.3μm.

15. (AS ONCE AMENDED) A system according to claim 14, wherein said first terminal device further comprises a dispersion compensating fiber compensating for chromatic dispersion occurring in said optical fiber transmission line, and an optical amplifier amplifying the optical signal output from said optical transmitter.

16. (AS TWICE AMENDED) A terminal device comprising:

an optical transmitter outputting an optical signal having a chirping determined by a chirp parameter to an optical fiber transmission line, said optical signal generated by optical modulation based on a modulating signal obtained by adding a redundancy code to a transmission data code;

means for receiving supervisory information on a bit error detected in relation to the optical signal transmitted by said optical fiber transmission line; and

means for controlling said chirp parameter according to said supervisory information so that said bit error detected is reduced, wherein said supervisory information including the number of corrections of said bit error obtained in correcting said bit error of said electrical signal according to said redundancy code and wherein said means for controlling said chirp parameter based upon comparing between a first number of corrections of said bit error and a second number of corrections of said bit error.